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During the first months after birth, a child's functions begin to emerge. By age three a child is expected to have mastered the basic tasks of (1) good vegetative functioning (management of drives and impulses involved in eating and elimination), (2) perceptual organization and familiarization with the home environment and skills to orient to a new environment, (3) motor skills, (4) communication skills, (5) emotional organization, including the capacity to attach and respond to other adults and children and the capacity for love and anger, (6) sphincter control, and (7) beginning to understand time, number, and space which help to organize the present, recent past and near future. As the preschooler nears school age he learns how to adapt to separation from his mother and home, to relate to peers and a neutral teacher, and to accept rules of behavior required by a structured school atmosphere. Throughout a child's development, learning processes including Pavlovian conditioning, trial and error learning, and operant conditioning take place. Individual differences affect the complex adaptational style which evolves as the child attempts to deal with his environment. A bibliography is included. (MS)

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ADAPTATIONAL TASKS IN CHILDHOOD IN OUR CULTURE*

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In the more than 100 years since The Origin of Species an increasingly balanced understanding of adaptational processes in human beings has gradually emerged. The concept of phylogenetic evolution with its insight into the prerequisites for survival of a given organism in a specific environment was followed by a series of steps in the understanding of ontogenetic development. It is not surprising that different streams of scientific work had to continue to be separate for half a century. Those initiated by Freud's contributions to the understanding of epigenesis of drive[1] and aspects of mental functioning influenced by drives remained relatively remote from the successive discoveries of experimental and developmental psychology of the universities. This was true despite the interest of G. Stanley Hall - founder of child psychology - in Freud's work, and later, the interest of Susan Isaacs[2] as early as the 20's in contributions from experimental work.

Only when Freud's own formulations regarding the ego were followed by Hartmann's monograph[3] on the ego and the problem of adaptation was the way opened for more spontaneous rapprochement of the two broad streams of investigations. The later work of Piaget on the development of intelligence[4] has captured the interest of a large body of workers, some of whom have also been interested in analyzing parallels and differences between Piaget and Freud.[5] But there is room for much more work toward an integrated dynamic view of the adaptational process. This discussion of basic tasks of adaptation is one step in this direction - a step taken in response to stimulation by new reports of Soviet psychology, recent developments in Western psychology and also by data from our own research.

Development in Infancy:

The first and most basic task of human development, as well as the one which lasts the longest, in fact for the lifetime of the individual, is to survive. For the very young baby in the critical early weeks of post-natal life this is a matter of achieving adequate integration in the basic vegetative functions such as breathing, feeding and digesting, eliminating, resting and sleeping. Achievement of smooth organic functioning is important not only in its own right, but also as a prerequisite for the stable positive mood-level sometimes described as bliss or narcissistic pleasure. Without a dependable experience of feeling good within himself the infant has little basis for attributing goodness to the external world. Moreover, when difficulties in oral and gastrointestinal functioning, lack of skin comfort, or other primitive gratifications, contribute to overwhelming and persistent distress with autonomic flooding, the autonomous development of perceptual and other cognitive functions is jeopardized. However, mild discomforts, within the range of the infant's capacity to handle through motor coping devices, can stimulate adaptive efforts.

Broadly speaking, survival implies another basic task of the infant: to grow up at a pace consistent with optimal functioning of his own equipment and development of his capacities, in cooperation with appropriate stimulus, support and protection from the environment. Thus stimulus management is another basic task: in relation to (a) evoking enough and sufficiently relevant stimulation for the development of specific aspects of perceptual-motor and other cognitive functioning; (b) protecting oneself

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against excessive or painful stimulation which could interfere with optimal development of perception, memory, image formation and their use in differentiation of the self from the external world and interacting with it; (c) selecting the stimuli needed for development of integrative functions of the ego. The latter include the organized orientation (cognitive map building) to the environment; the selection of relevant gratifiers or means of gratifying ends; the mobilization of motor resources in goal-directed action; and developing both the capacity to accept substitutes at times, to wait at times, as well as to use both the environment and the self for stimulation.

Active participation in the evolution of basic relationships to other persons as differentiated individuals (with or without exclusive attachment to the mother) is another major task of the first year. This uses the infant's capacity to evoke satisfying action from the caretaker in times of need, mutually responsive communication, and affective exchange, and the related foundations of basic identification. Closely related to the above are the complex capacities to cope with separation, loss, change. The latter implies adequate development and use of imagery and fantasy and anticipation of future gratification.

"Sensitive phases" or "critical phases"[6] are sometimes differentially referred to the period of emergence and still incomplete integration of new evolving functions, and the time period when stimulation is required specifically for consolidation of a new process or function, as in the critical phase for imprinting as discussed by ethologists.[7] With infants, the first days after birth may be considered a critical phase for the integration of feeding mechanisms; but the whole first year (during which the infant triples his weight) is a period when oral needs are intense, although no more important than the infant's <u>need for contact</u>, for adequate <u>stimulation</u> (nutriment) for all the basic sensory-motor functions, and for the establishment of basic human <u>relationships</u>.

That is, a series of sensitive phases may be seen in the first year of life as new functions are emerging, functions involved in handling the tasks outlined above; these may be roughly summarized as follows, with the proviso that wide individual differences in timing of the emergence of function have been documented in many investigations.[8]

<u>Emergence of Functions</u>:

1. The first weeks after birth are critical for organic integration and the related sense of well-being as mentioned above.

2. At about eight weeks the emergence of more focused, sustained and selective looking and listening presents a sensitive phase for perception, with a danger of overstimulation and fixation of defenses against this, or the danger of apathy in the case of understimulation. (This does not mean that perception "begins" at this time; early precursors in the "orienting reflex" which from birth may even interrupt feeding, visual fixation, response to auditory stimulus, are all evidence of the gradual integration of perceptual capacities). The emergence of the "smile of recognition" in response to the human face parallels this increased organization of visual and auditory perception. Infants need stimuli of some degree of complexity.

3. At about four months or later, differing with different infants, the beginning emergence of differentiation between self and the external world is a sensitive phase for the consolidation of both objectivity and a delighted response to stimulation as opposed to a confused or suspicious, affectively-loaded perception of the external world. Normally at this stage we see a peak of joyful, eager response to stimulation and beginnings of deliberate if still vague affecto-motor behavior to evoke interaction with other persons.[9] The suspicious or hostile orientation may become patterned or

fixed when persistent acute distress (presumably accompanied by autonomic upheaval and flooding of the brain with chemical by-products) prevents adequately neutral or serene perceptual development. This can be seen most vividly in cases of unreachable, frantic, disorganized children who are not merely "emotionally disturbed" at a later stage but do not have foundations for dependably satisfying perceptions. To them the world can cause only distress.

The development of discrimination between self and the world is supported by the emergence of more active sensory-motor interactions with major objects in the environment. Now the infant has the task of extending his repertoire of resources for making something (pleasurable) happen. Objects capable of providing pleasure - the breast or the bottle - are recognized at this time.

Parallel with the basic self-object differentiation is the discrimination between factors relevant and irrelevant to pain or pleasure. Memory of painful inoculations is global during the early months; anxiety regarding anticipated inoculation is aroused by perception of the doctor's office or the doctor in a white coat in contrast to the only gradually differentiated assocation of anxiety specifically with the inoculating needle.[10] The task of learning exactly what to blame or to be anxious about thus involves increasing differentiation of threatening parts in an experience-whole, which generally develops only from six months on.

4. At six to eight months differentiated recognition of mother in contrast to strangers[11] has emerged or is emerging, although some infants show this much earlier. We find now a sensitive phase for separation anxiety[12] regarding the strangers. Some infants are able to cope with the task of mastering this anxiety within a few weeks, and C. Buhler[13] included this capacity as an eight-months developmental test. For other infants these sources of anxiety remain acute through the second year of life or until autonomy in basic functions has provided added security. A variety of coping devices may be developed to deal with anxiety regarding strangers, including strategic or self-protective withdrawal, and the elaboration of multiple ways of maximizing contact with the mother (turning toward, running to, climbing onto her lap, clutching at her skirt).

5. Meantime, parallel with the increasing perceptual organization of the environment and discrimination between self and environment is the increasing awareness of and cathexis of self, which has to proceed to a point of clarity about what one can manage alone before separation from mother (as protector and buffer against the world) can be tolerated. This blossoms during the second year, intensified by the vivid consciousness of control of the body as toilet training is accomplished, and also control of the environment.

6. Fundamental for these basic tasks of achieving secure and gratifying differentiation between self and the world, and the sense of control of both, are the motor developments (standing, creeping, beginning to walk) which present a multitude of challenges to the infant, new sources of information about the world, ways of using it, and both potential gratification and potential pain to be encountered in his explorations. He has to learn the rudiments of how to be safe and avoid collisions at this stage, as well as what satisfactions are provided by what sources.

7. Continuing through the second year, although beginning in the first half-year, is the mastery of many specific ways of using the body and parts of the body, from early learning to roll over, to sitting up; then to stand, creep, walk, and later to climb and to jump. The major body achievement of a vertical position (standing, walking) often brings the first open expressions of triumphant mastery. The achievements contribute to new dimensions of the sense of well-being, which arises not only from the sensations associated with good vegetative functioning, but also

from striped muscle sensations involved in the practice of the new coordination. These experiences of delight in mastery, or triumph, are doubtless very important in motivating the further effort needed to move on to new stages of control, and of integration of basic skills with more complex interactions with the personal and the impersonal world. The period of first emergence of any of these skills may be a sensitive phase: Shirley[14] and others have noted instances of inhibition of walking after it had begun, following painful encounters or falls doubtless at a time of sensitization increased by other factors.

8. Another task which also goes along with those mentioned above is the development of the capacity for communication of wants, needs, frustrations, pleasure and unhappiness. This actually begins after birth with crying, at first a reflex but soon used as an expression of discomfort or need for attention. More differentiated expressions of protest, demand or interest, hunger, or pain as well as expressions of comfort and joy, develop during the first six months. By the age of eight months babies have been observed to differentiate between different emotional expressions from the mother[13] although even earlier some babies can be inhibited by controlling words expressed by the mother such as "Ssh" or "No, no."[15] The expression of needs and of both pleasure and displeasure, insofar as it evokes appropriate and helpful responses from the environment, also brings a new dimension to the sense of well-being: trust,[16] security, confidence,[17] or perhaps we could say a feeling of attunement between one's self and the world. This does not mark an entirely new development of interaction between cathexis of the self and the environment, but rather a culmination and integration of positive feelings responding to good interactions with the environment.

Any new phase in communication is similarly "sensitive," in that adequate response from mother or caretaker is needed for the promotion of communication. Maternally deprived babies are not only emotionally apathetic[18] but lacking in the signaling resources developed by others who are adequately mothered.

9. After the first year of life come increasing societal demands for autonomy, control of sphincters and of aggression, and modulation of both aggression and erotic responses. Perhaps there are simple practical reasons for the earlier response to toilet training demanded in temperate climates where the small child has to wear more clothes; when clothes are unnecessary in early childhood, soiling is less of a problem. When demands from adults for conformity to toilet training coincide with the burst of autonomy awareness which accompanies motor achievements, an intense conflict between the child and the environment may ensue. However, when this conflict is avoided, sphincter control adds another dimension to autonomy. Thus the second year is recognized as a critical phase for the constructive integration of autonomy.[16]

Increasing capacities for self-help, in self-feeding, as well as in keeping clean, and also the expression of needs in speech rather than nonspecific crying or gestures, further this growing autonomy. Teasing, humorous or provocative defiance, escape from and experimental imitation of adults are among the expressions of new self-awareness in the second year of life, as each child solves the problem of becoming an "I" in his own way. Illness or other gross interference with emerging autonomy at this sensitive stage may retard or prevent adequate progress through this developmental phase. But favorable progress contributes to gradual outgrowing of infantile comfort devices.

10. Mastery of three-dimensional space, as increasingly encountered by the more skilled body, is followed by beginning mastery of time problems ("soon," "later") which contribute steadily to management of frustration, tolerance of change, newness and deviations from routine. These complex aspects of ego-functioning also develop out of interaction with the environment, and are vulnerable at this stage of insecure

autonomy. In this period, extreme frustration is apt to lead to regression.

11. Increasing capacity for spontaneous relations with peers, and the ability to use one's own ideas in beginning to carry on cooperative and imaginative play activities, begin to flower after such integrative developments reflected in mastering of space and time.

12. Mastery of three-dimensional space and time (past and future) contributes further to the capacity to plan, to forestall danger, to anticipate, wait for, or work toward future gratification. Closely related to these are the extended capacities for fantasy which provide new resources for both solitary and group play. Thus the two main gross areas of functioning - within the organism, and in its intercourse with the environment - may be seen as involving the task of maintaining sufficient internal integration on the one hand, and developing a style of interchange with the environment which supports the development of mutually satisfying relations between the individual and the environment.

To summarize thus far: In early infancy, if surviving and growing proceed smoothly, they are accompanied by a more or less vivid sense of well-being and narcissistic pleasure in each area of one's own functioning; then gradually, as the sense of self is differentiated and integrated, pleasure in one's self. Good oral experience, digestion and gastrointestinal functioning generally are one major zone, but also good management of stimulation so as to experience positive satisfaction from all of the senses, and a gradual increase in motor coordination and integration of motility with sensory functions, all contribute a share to gratifcation and, in turn, to ease in response to others.

At least relative serenity and freedom from strain, anxiety and the kind of distress which after the early months can be felt as localized pain, are important for the maintenance of the autonomy of emerging functions such as perception and locomotion and their integration with other aspects of functioning of the infant - his desires and his relations with the environment. Consequently the maintenance of a sense of well-being, referred to by van der Waals[37] as healthy narcissism, can be regarded as one of the major tasks of infancy, and a prerequisite for the emergence and organization of early ego functions at an optimal level. Capacities for organization of one's perceptions of the environment and oneself into integrated unitary wholes, for grasping sequences of events and also capacities for control or management of one's body and impulses, along with developing useful interaction patterns with the environment, are all involved here.

That is, on the heels of the emerging perceptual and motor functions with their integrations is the early discovery of the body and the self as distinct from the environment and the separation out of most significant figures in the environment, such as mother, from the rest. Only after the differentiation and separation of self from others and of mother as an important other from the rest of the people in the environment, is it possible for the baby to develop that special relation with the mother in which he is aware of needing her and becomes anxious when she leaves. As part of this process he differentiates the familiar from the strange; then a next step is the mastery of or getting used to the strange, by developing ways of managing strangeness and coming to terms with it, as well as finding new joy in the familiar.

By the age of three in our culture, then, we expect most children to have mastered the basic adaptational tasks of:

1) Good vegetative functioning including satisfying eating and elimination, and management of the drives and impulses involved in these.

2) Perceptual orientation to and familiarization with the environment of home and skills for orienting to a new environment.

3) Motor skills for exploring and using the spaces and objects of the environment in a satisfying way which leads to self-help, self-feeding, and increasing self-selection of stimuli from the environment.

4) Communication skills including both speech and expressions of feeling through face, body and voice, to implement needs and to share experiences.

5) Emotional organization including the capacity for attachment to and response to affective support and stimulus from adults and children and the capacity for love and anger toward major objects.

6) Sphincter control and capacity to keep clean along with other controls.

7) The beginning of concepts of time, number, space which help to organize the here-and-now, the recent past and the near future.

The Later Preschool Stage:

New energy resources appear to be released in many children both by these rich early achievements in the preschool years and by the new psychosexual interests which are combined with and stimulated by growing perceptual differentiation of size, sex differences, growth and time. The four-year-old phase in Western culture at least has been referred to as "the first adolescence."[19] It shares with the teen-age period a lively sense of sex roles and vivid heterosexual feelings, along with intense feelings about newly perceived size and adequacy. These parallel awarenesses of size, sex differences, growth, time, age, increasing skills - verbal, motor and conceptual ("Remember last year, Miss B., when I didn't understand?" asked one four-year-old) - and the push of new erotic drive and emotional expressiveness, all contribute to the four-year-old's dramatic expressions of love (in our culture) and thoughts of marrying his mother when he grows up.

Competition with father, older siblings, peers, and the need to combat the inevitable disappointments resulting from encounters with limits, all lead to elaborations of problems and to their possible solutions in fantasy which now becomes a major resource for dealing with problems at this stage. Oedipal conflicts turn into idiosyncratic dramas played out on the peer stage.

Aggressive vigor (fed probably by hormone changes, by energy released from the preoccupation with mastering basic motor skills, and by frustrations arising from the clash between new capacities and environmental restrictions) also becomes available for directed exploitation against competitors and adversaries, in some children, especially boys. Aggression parallels social sensitivity expressed in cooperation and even sympathy[20] at this stage.

Difficulties or failure in one or more of the developmental areas contributing to autonomy may be expressed in lack of progress in mastering strangeness and reducing dependence upon the mother; in anxiety, in extreme immaturities, and in failure to develop frustration tolerance, capacity to share with peers, and the flexible coping resources typical of this age. Symptoms such as prolonged bed-wetting, sucking, extreme dependence on blanket or bottle, extreme inhibition or immobilization may be related to failures or delays in one or more of the developmental tasks, as well as to difficulties in resolving conflicts regarding the need to retain possession of the parent. However, temporary interruption or

slowness in mastery of the preschool developmental tasks does not necessarily imply permanent danger to the integration of the child if progress is being made.

Behavior at a given stage cannot be evaluated without knowledge of the experiences through which the child has come at each phase, his individual equipment with its varying possibilities of minor or major defect or damage,[21] intrinsic difficulties in integration, the residua of preschool or infantile illness, or predispositions to anxiety[38] emerging from disturbances of infancy. A majority of our study group[22] had some symptoms at the preschool stage, chiefly enuresis and speech difficulties which for the most part were largely "outgrown" in the next few years, or modulated to the tolerance level of the subculture.

Later Tasks: Entrance to School:

At latency, entrance to school demands further final mastery of separation anxiety; new levels of relationship to a neutral teacher-object; capacity to accept new types of sterotyped structuring in the school situation, with its use of "rules" and combined appeal to conscience or "honor" and respect for external control; capacity to focus on autonomous ego functioning with minimal or only periodic opportunity for impulse expression; capacity to transfer investments and interest to the peer group, and to tolerate much less absolute acceptance than may have been characteristic within the family at the infancy and preschool level even for children exposed to taunts and rejection by peers.

Mastery of the new challenges greatly strengthens the child's capacity to let go of intense involvements with parents, and acceptance of rules which organize peer relationships helps acceptance of home rules. Where illness, developmental defects or imbalances interfere with typical latency achievements, realistic dependence on the mother continues and, with it, persistent oedipal conflicts as well.

Difficulties and failures to achieve the further levels and areas of integration, and resources for coping with the environment and with inner needs and conflicts, may be expressed in new forms or intensity of separation anxiety (school phobia), severe psychosomatic reactions or other disturbances of physiological functioning and control, as in enuresis, or disturbances of cognitive functioning even reflected in a decline in tested intelligence scores.[23]

At the same time, for the majority of normal children who manage these shifts ("We have to sit still and be quiet, and listen to the teacher - and I'm the best one!"), new rewards of increased cognitive and motor skills, participation in organized games, along with external recognition (marks, school offices), support new gratifications. Optimally the child learns to learn and to like learning, to be a member of a class and to have pride in his group.

At the prepuberty stage the child moves into junior high school with a shift from one major teacher to teaching situations which change from one teacher to another, involving the relinquishment now of a stable teacher-object and demand for still more autonomy and responsibility on the part of the child. Many children are anxious about the shift to junior high[24] and some have difficulty after it occurs, especially when previous difficulties in space-orientation, or familiarizing oneself in new situations or those involving frequent change, have persisted. Disequilibria and disorientations associated with the growth spurt and the peak of body tension contribute to anxiety at this stage. Sex-role identification has to be crystallized as a precondition for smooth heterosexual interactions, and in the present generation can present a crisis even at this early stage. Shifts in body configurations, appearance and the fitting into cultural stereotypes for

attractiveness, difficulties such as acne, precocity or delay, emergence of primary or secondary sex characteristics, marked deviations in growth rate (slowest or fastest) or sudden changes expressed in dramatic shifts in height or weight, may all involve threats to naricissism - however well-rooted the child's early psychosexual progress and latency achievement - and to security in peer-group relationships. Further adverse effects on sex-role crystallization and efforts to consolidate identity are apt to accompany this narcissistic crisis at puberty.

These multiple threats and the resulting disequilibrium contribute to the upsurge of dependency needs and preoedipal problems already noted by Anna Freud[25] and others. At the same time, the increased anxiety about and often apparently neurotic dependence on peer-group acceptance involves not only increasing conflict with parent objects (and sometimes also teacher objects) but also a sense of loss and new forms of separation anxiety which in turn further reinforce the upsurge of dependency needs.

Deviations in the pattern of physiological maturation contribute special problems with peer-group isolation, which in turn also deprives the child of resources to outgrow dependency needs and intimacy with the mother, especially for girls. We know that unresolved conflicts from preoedipal or infantile levels tend to be revived or exacerbated in this phase of precarious integration; this is especially true under conditions of biological deviation. These problems may of course be increased by any recent or concurrent illnesses which add to the task of integration. Concurrent disturbances, either physical or emotional, in the parent tend moreover to make the child feel guilty about rebellion or even normal separation. The coincidence of maternal menopause with adolescent problems in the daughter or son makes resolution of these conflicts especially hard.

Conclusion:

When we investigate the ways in which more or less normal children cope with everyday developmental problems, we see that many of these are related to difficulties or (external or internal) conflicts in meeting basic needs in ways consistent with the sensitivities, capacities, drives, of the individual child - needs for adequate vegetative functioning and a sense of well-being, nutriment for every growing function as well as for communication, relationship and a place in the group.

Implied throughout this review of adaptational tasks are the contributions of (a) emerging drives and maturation of cognitive, motor[26] and affective[27] capacities; (b) the simultaneous operation of functions contributing to the formation of structures[4] and a variety of learning processes including classical Pavlovian conditioning,[28] operant conditioning, and trial and error learning. Affecto-motor functions,[9] and integrative functions of the ego[3,16,29] are shaped in functional interaction of drive and autonomous ego factors.

Individual differences in every aspect of equipment and drive, as well as differences in stimulation, demand from and frustrations by the environment, will affect the patterning of complex adaptational styles which evolve from the successive efforts of the child to deal with his environment.[15,30-36]

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